

REMARKS

Claims 12-15 and 31-34 have been withdrawn from consideration.

Claims 16-19 and 35-38 have been rejected under 35 USC 112(2) for stating the structure in an unclear manner in claims 16 and 35. Each of amended claims 16 and 35 states that at least a portion of one or more turns of the first conductor are each positioned adjacent to an inner side ("inner" meaning inward toward the center of the spiral) of at least a portion of one turn of the second conductor and that at least a portion of one or more turns of the second conductor are each positioned adjacent to an inner side of at least a portion of one turn of the first conductor. Support for this may be found in the specification at page 34 lines 5-9. This phrasing describes two spirals that intertwine with one another, with examples shown in both Figs. 14 and 15.

Claims 1, 6, 7, 10, 16-20, 25-26 and 35-38 have been rejected under 35 USC 102(e) as being anticipated by U.S. patent no. 6,404,317 ("Mizoguchi"). Independent claims 1 and 20 have been amended to state that only one magnetic layer may be placed over the substrate. Support for this limitation may be found in Fig. 1 and in the associated text from page 6 line 3 to page 9 line 22. All the embodiments of Mizoguchi contain at least two separate magnetic layers. Further, in anticipation that the rejection under 35 USC 102(e) might be changed to a rejection under 35 USC 103, applicant respectfully notes that there is no motivation to remove one of the two magnetic layers of Mizoguchi, since Mizoguchi uses both magnetic layers to provide shielding for the conductors in both directions.

Claims 6, 7, 16-17 and claims 25, 26, 35, 36, 38 depend from claims 1 and 20, respectively, and therefore contain the same limitations not disclosed by Mizoguchi. Claims 10, 18, 19 and 37 have been cancelled, rendering the rejection of those claims moot.

Claims 2-5, 21-24 have been rejected under 35 USC 103(a) as being unpatentable over Mizoguchi in view of Fessant. As has been shown, Mizoguchi does not contain all the limitations of claims 1 and 20, and therefore does not contain all the limitations of claims 2-5 and 21-24 through their dependency from claims 1 and 20. Fessant has been cited only to show the use of the specific materials in these claims, and does not make up for the limitations missing from Mizoguchi.

Claims 8, 9, 11 and 27-30 have been rejected under 35 USC 103(a) as being unpatentable over Mizoguchi in view of Takaya. Claims 8, 9 and 27-30 have all been cancelled, rendering the rejection to those claims moot. Claim 11 now recites that a magnetic layer (i.e., the same magnetic layer) is disposed between all the spiral of the first conductor and all the spiral of the second conductor. The Office action states that Mizoguchi does not disclose a magnetic layer disposed between the first and second conductors, and cites Takaya to provide this limitation. However, Takaya builds a stacked layer construction using multiple magnetic layers, each magnetic layer being placed between only a portion of the conductors, and thus does not disclose or suggest a magnetic layer between the entirety of the spirals of the two conductors.

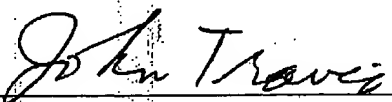
CONCLUSION

For the foregoing reasons, Applicant submits that claims 1-7, 11, 16, 17, 20-26, 35, 36 and 38 are now in condition for allowance, and indication of allowance by the Examiner is respectfully requested. If the Examiner has any questions concerning this application, he or she is requested to telephone the undersigned at the telephone number shown below as soon as possible. No fee is believed due in connection with this response. If this is incorrect, please charge any insufficiency or credit any overpayment to Deposit Account No. 02-2666.

Respectfully submitted,

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APPENDIX A

Marked-up version of amended claims:

1. (Amended once) A transformer comprising:
a substrate comprising a semiconductor material;
a first conductor over the substrate, the first conductor defining a generally spiral-shaped signal path having at least one turn;
a second conductor over the substrate, the second conductor defining a generally spiral-shaped signal path having at least one turn; and
[a] one, and no more than one, magnetic layer over the substrate.
7. (Amended once) The transformer of claim 6, wherein the magnetic layer lies in a position selected from between the substrate and the first conductor, between the first and second conductors, [or] and over the second conductor.
- 8-10. (Cancelled)
11. (Amended once) A transformer comprising:
a substrate comprising a semiconductor material;
a first conductor over the substrate, the first conductor defining a generally spiral-shaped signal path having at least one turn;
a second conductor over the substrate and over the second conductor and defining a generally spiral-shaped signal path having at least one turn; and

a magnetic layer disposed between all of the spiral-shaped signal path of the first conductor and all of the spiral-shaped signal path of the second conductor. [The transformer of claim 6, wherein the magnetic layer lies between the first and second conductors; and wherein the transformer comprises another magnetic layer over the second conductor.]

16. (Amended once) The transformer of claim 1, wherein the first and second conductors are positioned such that at least a portion of one or more turns of the first conductor are each positioned adjacent to an inner side of at least a portion of one turn of the second conductor and such that at least a portion of one or more turns of the second conductor are each positioned adjacent to an inner side of at least a portion of one turn of the first conductor.

18-19. (Cancelled)

20. (Amended once) A method comprising:

forming a first conductor over a substrate comprising a semiconductor material, wherein the forming the first conductor comprises forming the first conductor such that the first conductor defines a generally spiral-shaped signal path having at least one turn;

forming a second conductor over the substrate such that the second conductor defines a generally spiral-shaped signal path having at least one turn; and

forming [a] one and only one magnetic layer over the substrate.

26. (Amended once) The method of claim 25, wherein the forming the magnetic layer comprises forming the magnetic layer in a position selected from between the substrate and the first conductor, between the first and second conductors, [or] and over the second conductor.

27-30. (Cancelled)

35. (Amended once) The method of claim 20, wherein the forming the first conductor and the forming the second conductor comprise forming the first and second conductors such that at least a portion of one or more turns of the first conductor are each positioned adjacent to an inner side of at least a portion of one turn of the second conductor and such that at least a portion of one or more turns of the second conductor are each positioned adjacent to an inner side of at least a portion of one turn of the first conductor.

37. (Cancelled)